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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/752,813	12/29/2000	Richard S. Jensen	P9955	1535
8791	7590	06/13/2005		
			EXAMINER	
			PHU, PHUONG M	
			ART UNIT	PAPER NUMBER
			2631	

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/752,813	JENSEN ET AL.	
	Examiner	Art Unit	
	Phuong Phu	2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 27 April 2005.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-5,8-16 and 18-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-5, 8-16,18-24 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

This Office Action is responsive to the Amendment filed on 4/27/05.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 23 and 24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 23 recites the limitation “a transmitter”. It is unclear whether the limitation refers to “a transmitter” previously recited in claim 22. Correction is required; otherwise, said limitation is not disclosed in the Specification.

Claim 24, as depended on claim 23, therefore is also rejected.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-5, 8-16 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

-Claim 1 omits functional/structural/connectional interrelationship of elements “edge processor”, “communication circuit”, “plurality of current source” and “resistor” to one another

in order to make the claimed apparatus as a complete operative and connective system. Said omission renders the claim indefinite as following:

it is unclear whether the “communication circuit” is coupled to an input or an output of the “edge processor” and whether the “communication circuit” is coupled to the “edge processor” at an input or an output of the “communication circuit”;

it is unclear whether the “plurality of current sources” is coupled to an input or an output of the “communication circuit” and whether “plurality of current sources” is coupled to the “communication circuit” at input(s) or output(s) of the “plurality of current sources”;

it is unclear whether each of the “differential pairs” is coupled to an input or an output of the “resistor” and whether each of the “differential pairs” is coupled to the “resistor” at input(s) or output(s) of the “differential pairs”;

it is unclear about the interrelationship of “communications” (recited on line 4) with “decisions” and/or “received data stream”;

it is unclear about the interrelationship of “different pair” and “different voltage” (on line 7) to each other and to “communications”, “decisions” and/or “received data stream”; and

it is unclear about the interrelationship of “resistor” (on line 8) with “different voltage” and/or “differential current” (on lines 7 and 8).

-Claim 8 omits functional/structural/connectional interrelationship of elements “first unit” with elements “transmitter” and “edge based receiver” in order to make the claimed apparatus as a complete operative and connective system. Said omission renders the claim indefinite as following: it is unclear the “first unit” converts the “signal” between the “transmitter” and the

“edge-based receiver” in a direction from the “transmitter” to the “edge-based receiver” or in a direction from the “edge-based receiver” to the “transmitter”.

-Claim 8 omits functional/structural/connectional interrelationship of elements “plural of current sources”, and “plurality of resistors” with element “edge based receiver” in order to make the claimed apparatus as a complete operative and connective system. Said omission renders the claim indefinite as following:

it is unclear whether the “current sources” are coupled to an input or an output of the “edge-based receiver” and whether the “current sources” are coupled to the “edge-based receiver” at input(s) or output(s) of the “current sources”;

it is unclear whether the “plurality of resistors” are coupled to input(s) or output(s) of each of the “differential pairs” and whether the “plurality of resistors” are coupled to each of the “differential pairs” at at input(s) or output(s) of the “plurality of resistors”.

-Claim 11 omits functional/structural/connectional interrelationship of elements “transmitter”, “edge based receiver”, “conversion circuit”, “current sources” and “resistors” to one another to make the claimed system as a complete operative and connective system. Said omission renders the claim indefinite as following:

it is unclear whether the “edge based receiver” is coupled to an input or an output of the “transmitter” and whether the “edge based receiver” is coupled to the “transmitter” at an input or an output of the “edge based receiver”;

it is unclear whether the “conversion circuit” is coupled to an input or an output of the “edge-based receiver” and whether the conversion circuit” is coupled to the “edge-based receiver” at an input or an output of the “conversion circuit”, and whether “the signaling”

between the “transmitter” and the “receiver” in a direction from the “transmitter” to the “receiver” or from the “receiver” to the “transmitter”;

it is unclear about the interrelationship of “signaling between the transmitter and the receiver”, “current mode driver”, “high impedance output”, “dual end termination” and “edge processor” to one another; and

it is unclear about the interrelationship of “plurality of differential voltages” with “conversion circuit”.

Claims (if any) dependent on above claims are therefore also rejected with the above reasons.

5. Claims 19-24 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01.

Claim 19 omits steps showing interrelationship of “a transmitter” with other steps recited in the claim.

Claim 19 omits steps showing interrelationship of step “summing the plurality of differential currents to yield a single differential load” with element “the edge based receiver” recited in step “coupling the plurality of differential currents to the “edge-based receiver”. Said omission renders the claim indefinite as following:

it is unclear whether the “plurality of differential currents” are coupled to an input or an output of the “edge-based receiver” and whether “plurality of differential currents” are coupled to the “edge-based receiver” at input(s) and output(s) of the differential currents”.

Claim 21 omits steps showing interrelationship of “an edge processor” with other steps recited in claims 19-21 and with “transmitter” recited in claim 19.

Claim 22 omits steps showing interrelationship of “a transmitter” with other steps recited in the claim.

Claim 22 omits steps showing interrelationship of step “summing the plurality of differential currents to yield a single differential load” with element “an edge based receiver” recited in step “coupling the plurality of differential currents to an edge-based receiver”. Said omission renders the claim indefinite as following:

it is unclear whether the “plurality of differential currents” are coupled to an input or an output of the “edge-based receiver” and whether the plurality of differential currents” are coupled to the “edge-based receiver” at input(s) or output(s) of the “plurality of differential currents”.

Claim 24 omits steps showing interrelationship of “an edge processor” with other steps recited in claims 22-24 and with “transmitter” recited in claim 22.

Claims (if any) dependent on above claims are therefore also rejected with the above reasons.

Response to Arguments

6. Applicant's arguments filed on 4/27/05 have been fully considered but they are not, in part, persuasive.

The previous objection on the Specification has been withdrawn since the specification was amended to overcome the objection.

The previous objection on claim 10 has been withdrawn since the claim was amended to overcome the objection.

The previous rejection, under 35 USC, first paragraph, to claims 9 and 18-22 have been withdrawn since the claim was amended to overcome the objection.

The previous rejection, under 35 USC, first paragraph, to claims 23 and 24 is still maintained because of reasons set forth in this Office Action.

Applicant's argument with respect to the rejections, under 35 USC, second paragraph, to claims 1-4, 8-16 and 18-24 as being incomplete, has been considered. However, the claims, after being amended, are deemed still to be rejected with reasons set forth above in this Office Action.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2631

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong Phu whose telephone number is 571-272-3009. The examiner can normally be reached on M-F (6:30-2:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phuong phu

Phuong Phu
06/06/05

PHUONG PHU
PRIMARY EXAMINER

Phuong Phu
Primary Examiner
Art Unit 2631